

## TITLE 11

## DEPARTMENT OF HEALTH

## CHAPTER 42

## VEHICULAR NOISE CONTROL FOR OAHU

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Historical Note: Chapter 42 of Title 11, Administrative Rules, is based substantially on Public Health Regulations Chapter 44A, Vehicular Noise Control for Oahu, Department of Health, State of Hawaii.  
[Eff. 3/24/72; R **NOV 06 1981** ]

§11-42-1 Purpose. It is the purpose of these rules to state the maximum sound levels that vehicles shall be allowed to emit when used on traffic ways on the island of Oahu. These rules are intended to limit such maximum sound levels to those consistent with the physical, mental, and social well-being of the people. [Eff. **NOV 06 1981** ] (Auth: HRS §342-3, 342-42) (Imp: HRS §342-42)

§11-42-2 Definitions.

"Ambient noise level" means the sound level which exists at a point of measurement in the absence of the sound emitted by a vehicle the noise emission of which is measured, being the total effect of all other sounds coming from near and far.

"ANSI" refers to the American National Standards Institute.

"Auxiliary device" means an implement, tool, instrument, appliance, utensil, or contrivance.

"Back-up alarm device" means a warning device in any truck such as a horn, bell, or whistle in the rear thereof, sounded only while the truck is backing up.

"Center line of a vehicle" means a line which passes through the geometric center of a vehicle along the longitudinal axis of the vehicle; or, if the vehicle is in motion, that line passing through the geometric center of the vehicle along which the geometric center moves.

"Day" means the twenty-four hour time period starting at local midnight.

"Day-time" means 6:00 a.m. - 6:00 p.m.

"dB" is the abbreviation for decibel.

"dBA" is the composite abbreviation for decibel and A-weighted sound level.

"Decibel" means unit of sound level.

"Department" means the department of health, State of Hawaii.

"Director" means the director of the department of health, State of Hawaii, or his duly authorized agent.

"Evening" means the time period from 6:00 p.m. to 10:00 P.M.

"Good professional practice" means the methods and procedures used by a person whose skills have been developed by formal training and experience, and whose work is accepted by others of similar training and experience as competent.

"Heavy vehicle" means a vehicle which has a manufacturer's gross vehicular weight rating of ten thousand pounds or greater.

"Holiday" means a day fixed by the United States or by state law for suspension of business in whole or in part.

"Light vehicle" means a vehicle not specifically identified as a heavy vehicle.

"Measurement distance" means the shortest interval of length between a center line of a vehicle and a point of measurement.

"Nearest point of vehicle approach" means that point along the center line of vehicle travel which is closest to the point of measurement.

"Night" means the time period from 10:00 p.m. to 6:00 a.m.

"Noise" means sound of any sort emitted by a vehicle and its environmental interaction.

"Noise level" means the sound level.

"Operate" means to perform any operation with or on a vehicle or auxiliary device at any time or under any condition of grade, load, acceleration, or deceleration.

"Owner" means, with regard to a vehicle, the legal owner, registered owner, lessee (of whatever term), or the purchaser under a conditional sales contract, but not including the holder of a security interest in a conditional sales contract.

"Point of measurement" means the point in space at which the microphone of the sound measurement equipment is located.

"Sound level" means a quantity measured with a sound level meter and expressed in decibels.

"Sound level meter" means an instrument, or combination of instruments, which meets or exceeds the requirements for a type S1A or type S2A sound level meter as specified in American National Standards Institute specification for sound level meters S1.4-1971.

"Sound pressure level" means the value in decibels expressing the relationship between a root-mean-square sound pressure,  $p$ , and a reference pressure,  $P_{ref}$ , where

$$\text{Sound pressure level} = \frac{10 \log_{10} p^2}{p_{ref}^2}$$

and  $P_{ref} = 0.0002$  microbar. The abbreviation for sound pressure level is SPL.

"Spherical spreading" means sound propagation in which the sound level decreases six decibels for each doubling of distance from the source of sound.

"Trafficway" means the entire area within the property lines of every way or place, including parking areas, publicly or privately owned or maintained, which is open to the use of the public for purposes of automotive traffic.

"Truck route" means a sequence of trafficways identified by the director for the regular and repeated daily use of trucks.

"Vehicle" means any device, or combination of devices, used for or capable of being used for transporting persons or property. Vehicles include but are not limited to the following: automobiles; trucks; buses; motorcycles; motorized bicycles; scooters; go-carts; midget racers and like devices; farm machinery; industrial machinery; highway graders; trailers and semi-trailers. [Eff. **NOV 6 1981** ]  
(Auth: HRS §§342-3, 342-42) (Imp: HRS §342-42)

§11-42-3 Application. (a) These rules shall apply to all vehicles wherever operated on trafficways on the island of Oahu.

(b) These rules shall apply to sounds of any time duration.

(c) For the purpose of these rules those persons who are the vehicle owner(s) or operators may be held responsible separately or jointly for a violation.

(d) In the event that the principals to any action taken under these rules differ in their interpretation of the meaning and intent of any word, phrase, sentence, or other grammatical construction, the rule of a reasonable man shall be used to determine the

correct meaning and intent. [Eff. \_\_\_\_\_ ]  
(Auth: HRS §§342-3, 342-42) (Imp: HRS §342-42)

§11-42-4 Exemptions. The following devices are exempt from the provisions of this chapter:

- (1) Aircraft.
- (2) Boats.
- (3) Police and fire vehicles (including motorcycles), ambulances (private or public), and state, city, and public utilities vehicles used for maintenance and repairs within the scope of the operator's employment and when on emergency calls.
- (4) All vehicular warning devices authorized for use under the traffic code of the county where such devices are operated in accordance with the traffic code of the county.
- (5) Back-up alarm devices on trucks when installed and operated in accordance with Society of Automotive Engineers Handbook, 1979, Part 2, "Performance, Test, and Application Criteria for Electrical 1 Operated Backup Alarm Devices" J9946.  
[Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-42)  
(Imp: HRS §342-42)

§11-42-5 Variances. The director may grant, modify, suspend, revoke, and deny variances to operate vehicle which emit noise levels in excess of the limits specified in these rules. Variances shall comply with HRS §342-7. [Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-42)  
(Imp: HRS §§342-7, 342-42)

§11-42-6 Truck routes. (a) The director may identify truck routes where, in his judgment, there is a clear need in the public interest for the truck services. Truck routes shall be selected so that the noise created by vehicles using them affects the least number of people.

(b) The director may identify interim truck routes for a time duration of six months.

(c) Any trafficway within areas zoned as listed below by the county is a regular truck route:

- (1) AG-1 Restricted agricultural district;
- (2) AG-2 General agricultural district;
- (3) B-4 Central business district;
- (4) I-1 Light industrial district;
- (5) 1-2 Heavy industrial district; and
- (6) 1-3 Waterfront industrial district.

(d) The director may adopt, modify, or revoke a regular truck route only after a hearing in accordance with HRS §91-3(a) has been held. [Eff. **NOV 8 1981** ]

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(Auth: HRS §§342-3, 342-42) (Imp: HRS §342-42)

§11-42-7 Light vehicles. No person shall operate, nor shall its owner permit the operation of, a light vehicle, or any auxiliary device attached to or required for the operation of said vehicle, on any trafficway in such a manner that it emits noise at levels in excess of the limits specified in table A-1.

Table A-1

Noise Level limits for Light Vehicles

<u>Posted Speed Limit</u>	<u>Measurement Distance</u>		
	<u>20 ft.</u>	<u>25 ft.</u>	<u>50 ft.</u>
25 mph or less	77 dBA	75 dBA	69 dBA
30	79	77	71
35	81	79	73
40	83	81	75
45	85	83	77
50	87	85	79
55	89	87	81
60 mph or more	91	89	83

[Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-42)  
(Imp: HRS §342-42)

§11-42-8 Heavy vehicles. No person shall operate, nor shall its owner permit the operation of, a heavy vehicle, or an auxiliary device attached to or required for the operation of said vehicle, on any trafficway in such a manner that it emits noise at levels in excess of the limits specified in table B-1.

Table B-1

Noise Level Limits for Heavy Vehicles

<u>Posted Speed Limit</u>	<u>Time Periods When Applicable</u>	<u>Measurement Distance</u>		
		<u>20 ft.</u>	<u>25 ft.</u>	<u>50 ft.</u>
35 mph or less	Day-time	92 dBA	90 dBA	84 dBA
	Evening	92	90	84
	Night	81	79	73
	Holiday			
	Sunday			
More than 35 mph	All	92	90	84
Truck routes	All	96	94	88

[Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-42)  
(Imp: HRS §342-42)

§11-42-9 Mufflers. (a) No person shall operate, nor shall its owner permit the operation of, a vehicle on a trafficway with a motor or exhaust system or both which has or have been altered, modified, or repaired in such a way that the noise emitted by said vehicle is increased above that emitted by the exhaust system or device with which said vehicle came originally equipped from the factory; provided that this section shall not apply if the operator or owner can show that the replacement component is of the same design as the original component.

(b) The burden of proof shall be on the owner or operator or both of a vehicle with an altered, modified, Repaired, or reconstructed motor or exhaust system or both to submit evidence that said system meets the provisions of §11-42-9(a) of these rules. [Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-42) (Imp: HRS §342-42)

§11-42-10 Measurement of noise levels.

(a) Persons who measure noise levels for the purpose of enforcing these rules shall be certified by the director as being trained in the techniques of sound measurement and qualified in the use of the instruments required to make such measurements.

(b) A sound level meter shall be used in measuring noise levels, except that:

- (1) the B and C weighting networks and the "slow" meter dynamic response characteristic need not be incorporated; and
- (2) A "hold" network may be incorporated.

(c) Measurements shall be made in accordance with good professional practice. In particular:

- (1) The "A" weighting network shall be used.
- (2) The "fast" meter response characteristic shall be used.
- (3) Sound level calibrators of the auxiliary closed-coupler type specified in ANSI standards S1.4-1971, shall be used.
- (4) Windscreens shall be used whenever appropriate.
- (5) Where measurements are made of vehicles in motion, the trafficway surface near the point of measurement shall normally be dry, of concrete or asphalt, free of extraneous loose material, and free of sharp bumps, chuckholes, wide cracks, and patches needing repair.
- (6) Measurement distances between twenty feet and fifty feet may be used. The spherical spreading law shall be applied to interpolate between the noise levels stated as limits. In the event that measurements at different distances do not conform to the predictions

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of the spherical spreading law, the measurement made at the greatest distance shall be used to determine compliance with these rules.

- (7) The various factors affecting the accuracy of a measurement, including those causing deviation from the spherical spreading law, shall be evaluated to the extent necessary for the implementation of these rules. For example, if the accuracy with which a measurement can be made with specific instruments at a specific location is plus or minus two dB, then any measured level greater than the specified limits plus two dB will indicate that excessive noise has been emitted.
- (8) Measurements shall normally not be used for enforcement unless the noise level at a point of measurement while a vehicle is operated is three or more decibels greater than the ambient noise level.
- (9) The ambient noise level may be estimated from sound levels measured before and after the passage of a moving vehicle or by sound levels measured at one or more points near the point of measurement. [Eff. **NOV 8 1981** ]  
(Auth: HRS §§342-3, 342-42) (Imp: HRS §342-42)

§11-42-11 Enforcement. (a) All officers and employees of the state and of the county, particularly health authorities, and police officers, shall enforce these rules.

(b) The director may, in his discretion, issue a warning to persons considered to be in violation of these rules which warning may allow an appropriate time, not to exceed thirty calendar days, for correction to bring the offending vehicle within the provisions of these rules before enforcement by prosecution is pursued against that person. [Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-17) (Imp: HRS §§342-8, 342-42, 342-17)

§11-42-12 Remedies and penalties. Violators of this chapter are subject to the remedies and penalties provided in §§342-8, 342-11(a), 342-11.3, 342-12, and 603-23, HRS. [Eff. **NOV 6 1981** ] (Auth. HRS §§342-3, 342-42) (Imp: HRS §§342-8, 342-11(a), 342-11.3, 342-12, 342-42, 603-23)

§11-42-13 Severability. If any provision of this chapter or application thereof to any person or circumstance is held invalid, the invalidity does not affect

other provisions or applications of the chapter which can be given effect without the invalid provision or application, and to this end, the provisions of this chapter are severable. [Eff. **NOV 6 1981** ] (Auth: HRS §§342-3, 342-42) (Imp: HRS §342-3)

The Department of Health authorized the repeal of Chapter 44A, Public Health Regulations and the adoption of Chapter 42 of Title 11, Administrative Rules on **SEP 24 1981** following public hearing held on August 26, 1981 after public notice was given in the Honolulu Star-Bulletin on August 3, 1981, in the Hawaii Tribune-Herald on August 3, 1981, in the Garden Isle on August 3, 1981, and in the Maui News on August 3, 1981.

Chapter 42 of Title 11, Administrative Rules and the repeal of Chapter 44A, Public Health Regulations shall take effect ten days after filing with the Office of the Lieutenant Governor.

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GEORGE YUEN  
Director  
Department of Health

APPROVED:

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GEORGE R. ARIYOSHI  
GOVERNOR  
STATE OF HAWAII

Dated: 10-24-81

APPROVED AS TO FORM:

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DEPUTY ATTORNEY GENERAL

Filed: **OCT 27 1981**

Effective Date: **NOV 6, 1981**